Math Service-Learning Projects | 3

Elementary

1. **Students collected, categorized and weighed the debris from a local preschool. Based on their** results, they decided to teach the preschoolers about recycling and set up a color-coded recycling program for them.
2. **After their new school was built, students decided to landscape the surrounding grounds. They** wrote a grant proposal to their principal and school board requesting funds to beautify the new space. Using their computation, measurement and budgeting skills, they worked with a landscape architect to design and build a garden and benches adjacent to the school.
3. **Students who attend school in a portable classroom felt that they were segregated from the rest of** the school. They decided all "portable" students needed a presence in the school building. Students used money and measurement skills to budget, design, purchase materials and construct a bulletin board inside of the school to hang their work and the work of future "portable" students.
4. **After learning about the sorrow in a prenatal ward, students used their knowledge of shapes,** as well as their problem solving, operations and measuring skills, to create a quilt to cheer up a family who had a child in the hospital.

Middle

1. **Realizing that many students don't see the connection between math and real life careers, math** students decided to produce informational brochures profiling math related careers. These brochures were distributed to school guidance counselors and college admission and career counseling offices throughout their community.
2. **Math students realized that many parents are unfamiliar with math vocabulary and resources and** because of that, are not helpful with homework. Outgoing students decided to hold a "Math Night" for incoming students and their parents to teach them about the new math program and how parents can support students with math homework throughout the year.
3. **Students worked with district curriculum coordinator to develop math handouts for incoming** students and families. They reviewed state math standards and created pamphlets in "kid language" showing math standards that students must demonstrate before going to high school. They included examples of ways students have demonstrated those standards in the past.
4. **Students worked with local architects and the Gulf of Maine Aquarium committee, to propose a** design for the new Gulf of Maine Aquarium. Their proposal included a floor plan, a written proposal and an oral presentation of their work. Students learned and used skills of drawing to scale, universal symbols, drafting and extensive geometry skills including area, perimeter and volume to create their designs.

Additional Service-Learning Projects on Back

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Math
Service-Learning Projects

High

1. **Through research, students discovered that other students and parents wanted to see more** activities available after school. These pre-algebra students teamed up with physical education and AutoCAD classes to create an Ultimate Frisbee course. Students worked with a local golf pro to develop the course. They measured the 9 holes, developed a formula to justify the value and difficulty levels of each hole (Par 3,4,5). After playing a series of rounds, the students determined the course's range of difficulties 1–9 and constructed scale maps and scorecards.

2. **Due to the overcrowded nature of the parking lot, students counted the number of cars that are** used to drive students to school and the number of students per car. They set up a chart of their school and asked the students what area they lived in. They created a graph of the number of cars per students in each area and sent a report home with students encouraging students and parents to carpool when driving students to school. On the side, one student did the research on how the decrease in driving to school would affect their carbon footprint and added this to their report.

3. **After determining that the baseball field was in disrepair, geometry students made specific** recommendations on ways to improve the condition of the field, including erosion control on a sloping hill.

4. **Students conducted a study of the traffic speeds in their downtown area. Using a speed gun,** provided by the police department, students analyzed the speeding patterns of motor vehicles. As a result, they asked selectmen for a traffic light to deter speeding. Their proposal was accepted and a traffic light was put in.

5. **Geometry students were asked by 4th graders to map a nature trail behind the elementary school.** The map was needed so the 4th graders could make a brochure of the nature trail for the community. The high school students used the geometry and measurement concepts that they learned in class to develop an accurate map, one that indicated where each of the 4th grade adopted trees was located.

6. **Students in a statistics course learned about contemporary issues, while analyzing multiple tables** of data. They became interested in whether many people in their community had asthma and if so what was being done about it. They created a survey to give to their community, analyzed it and made a presentation to the Mayor's office to start conversations about this issue in their community, with hopes of together coming up with a few actions to impact asthma.

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